

REMARKS/ARGUMENTS

Reconsideration is respectfully requested.

The Office Action dated July 5, 2006 indicates that Claims 1 and 19 may more specifically distinguish the Kobayashi reference if specific language is recited in those claims that more readily expands on the limitation of "directly measuring the capacity of hydrogen in the system", for which indication the Applicants express their appreciation.

By this amendment, Applicant has amended Claims 1 and 19 to recite that the metal hydride material is "free of a binder or other material capable of measuring a characteristic of the hydride material or of the hydrogen capacity in the system." The limitation that the fuel guage "directly" measure the capacity of hydrogen has now been amended to more particularly point out and distinctly claim the subject matter of the applicant's invention.

With respect to term "directly" recited in Claims 1 and 19, the claims as amended now recite that the fuel gauge directly measures the capacity of the hydrogen without a binder.

The Rejection of Claims 1 and 19 is Traversed

It is respectfully submitted that the sole reference relied upon in support of the rejection is U.S. Patent No. 6,155,099, to Kobayashi et al. ("Kobayashi"). Kobayashi fails to teach the limitation that the fuel gauge "directly" measures the hydrogen capacity because Kobayashi requires that the "hydrogen occluding material" be incorporated within a matrix of a binder, such as carbon powder or

PTFE powder, so that it "results in change in the distances between the hydrogen occluding metal particles," see column 3, lines 1-39. That is, Kobayashi teaches that the resistance of the hydrogen occluding metal particles can be varied by the ratio of hydride particles relative to the binder, and that the binder is required so as to provide accurate resistance measurements. Moreover, other alternative binders are taught, such as electrically conductive powders, for example, carbon powder, aluminum powder or iron powder, column 3, lines 33-37.

In contradistinction, the present application fails to disclose or require any type of binder, whether conductive, semi-conductive or non-conductive, and this permits the direct measurement of the hydrogen capacity in the hydrogen alloy. As presently amended, independent Claims 1 and 19 now recite that the hydride material is free of a binder or other material capable of measuring a characteristic of the hydride material or of the hydrogen capacity in the system." As is described herein and in the U.S. Patents incorporated in the specification by reference, the hydrogen alloys are themselves in powder form and do not have any need of an alloy binder or other material to provide the necessary measurements. Since it is desirable that the volume of the canister contain as much hydride alloy, and thus as much hydrogen absorbing material, as possible within the cubic volume of the inside of the canister, the lack of a binder or other non-hydrogen absorbing material provides the benefit of maximizing the hydrogen absorbing capacity per unit volume. Consequently, the addition of the binder, as taught by Kobayashi, detracts from the ability to maximize hydrogen

storage, both per unit weight and also per unit volume, because valuable space and weight are taken up by the non-absorbing binder materials.

Because Claims 1 and 19 have been shown to distinguish the sole Kobayashi reference because no direct measurement is taught, and none of the other cited references appear to add appreciably to the teachings of Kobayashi, it is respectfully submitted that the generic Claims 1 and 19 are now allowable.

Applicants respectfully submit that all Claims 1-19 are now allowable, and request the withdrawal of the species restriction requirement based on the allowability of generic Claim 1.

Conclusion

For the above reasons, it is considered that the claims, as amended, find support in the application specification as filed, and that the combination of elements recited in the pending claims, as amended, distinguish over the references of record. Accordingly, reconsideration and withdrawal of the *Notice* outstanding rejections are respectfully requested and a Notice of Allowance of all pending claims is earnestly solicited.

Respectfully submitted,



Vangelis Economou
Reg. No. 32,341
Tel.: (312) 214-7770
Attorney for Applicant(s)

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RYNDAK & SURI LLP
200 W. Madison Street, Suite 2100
Chicago, IL 60606
(312) 214-7770